

Remarks

The Applicants have amended Claim 1 to include the subject matter of Claims 5 and 7. Claims 5 and 7 have accordingly been cancelled. Entry of these changes into the official file is respectfully requested.

Claim 28 has also been amended to include the subject matter of Claims 5 and 7. Entry of those amendments into the official file is also respectfully requested.

Claim 28 stands rejected under 35 USC §112 as lacking antecedent basis. The Applicants have amended Claim 28 to substitute “another” in place of “non-ductile resin.” The Applicants respectfully submit that this change provides the necessary antecedent basis. Withdrawal of the rejection is respectfully requested.

Claims 1, 2, 6, 10-14, 28, 29 and 33-36 stand rejected under 35 USC §103 over the combination of Ashcraft with Matsumura. In view of the incorporation of the subject matter of Claims 5 and 7 into independent Claims 1 and 28, the Applicants respectfully submit that the rejection is now moot. Withdrawal of the rejection is respectfully requested.

Claims 5, 7 and 8 stand rejected under 35 USC §103 over the further combination of Radovanovic with Ashcraft and Matsumura. The Applicants respectfully submit that the rejection is now moot with respect to cancelled Claims 5 and 7. Nonetheless the Applicants will address the rejection as it would theoretically apply to amended Claim 1. The Applicants respectfully submit that one skilled in the art would not make the hypothetical combination as set forth in the rejection, but in any event, even if the combination were to be made, the result would still be different from the subject matter of Claim 1 and the claims depending therefrom. Reasons are set forth below.

The Applicants first agree that Matsumura does not disclose “that other layers be used in conjunction with the network containing layer” as set forth in the rejection. The Applicants respectfully submit that Matsumura actually fails to disclose much more. Matsumura discloses a porous film consisting of a polyester. Matsumura also discloses that liquid-crystalline polyester is used as the polyester. Matsumura further discloses that biaxial stretching of the film can improve its mechanical strength. However, Matsumura does not disclose that 1) the network structure-including film layer contains liquid-crystalline polyester and non-liquid-crystalline polyester and/or polyphenylene sulfide, 2) the content of the liquid-crystalline polyester in the

network structure-including film layer is 20 to 90 percent by weight, and 3) an outer layer not having pores is laminated on an inner layer having pores.

These differences are important. The first difference improves mechanical strength, thermal dimensional stability, cushion properties and dielectric properties. The second difference improves film forming ability and pore forming ability (see the Applicants' specification at page 28, lines 8-19). The third difference improves productivity and flatness of the film because the layers that contain a thermoplastic resin do not have the network structure and the pores. Thus, the Applicants respectfully submit that there are multiple differences between Matsumura and the subject matter of Claim 1.

The rejection turns to both Ashcraft and Radovanovic to cure those deficiencies. The Applicants respectfully submit, however, that neither Ashcraft nor Radovanovic cure those deficiencies. Ashcraft and Radovanovic do not disclose the first difference, namely dimensional stability, cushion properties and dielectric properties simultaneously. In addition, Ashcraft and Radovanovic do not disclose the combination of liquid-crystalline polyester and non-liquid-crystalline polyester and/or polyphenylene sulfide.

The rejection recognizes that "Radovanovic discloses the combination of liquid-crystalline polymer and non-liquid-crystalline polymer." However, it is really a combination of crystalline polyolefin and non-crystalline polyolefin that Radovanovic discloses. It is not a combination of liquid-crystalline polyester and non-liquid-crystalline polyester. Moreover, liquid-crystalline polyester and crystalline polyolefin are different resins in all of their mechanical properties, thermal properties and stretchability. Further, non-liquid-crystalline polyester and non-crystalline polyolefin are different resins in all of their mechanical properties, thermal properties and stretchability.

Therefore, there is no motivation for one skilled in the art on the basis of Ashcraft and Radovanovic to use liquid-crystalline polyester and non-liquid-crystalline polyester and/or polyphenylene sulfide to improve mechanical strength, thermal dimensional stability, cushion properties and dielectric properties simultaneously. There is also inherently no reasonable expectation that such use would be successful. In fact, the Applicants respectfully submit that one skilled in the art would have a reasonable expectation that such use would not work.

The second difference of Ashcraft and Radovanovic improving film forming ability and pore forming ability simultaneously is not disclosed in Ashcraft and Radovanovic. In addition,

Ashcraft and Radovanovic do not disclose the content of the liquid-crystalline polyester. The rejection recognizes that "Radovanovic discloses a resin containing 15-80 parts of a liquid-crystal-polyethylene polymer." However, it is the content of crystalline polyolefin that Radovanovic discloses. It is not the content of liquid-crystalline polyester. Moreover, liquid-crystalline polyester and crystalline polyolefin are different resins in all of their stretchability and pore forming ability simultaneously. Therefore, Radovanovic does not teach the claimed content of the liquid-crystalline polyester. Thus, one skilled in the art on the basis of Ashcraft and Radovanovic art would not be motivated to control the content of liquid-crystalline polyester to improve film forming ability and pore forming ability simultaneously and one skilled in the art would not have a reasonable expectation of success.

Regarding the third difference, Ashcraft and Radovanovic disclose laminated film. However, one skilled in the art would not combine Matsumura with Ashcraft and Radovanovic. The reasons are as follows.

First, the films of Matsumura are manufactured by a solvent extraction method (solution casting process). On the other hand, the films of Ashcraft and Radovanovic are manufactured by the melt casting process. Since the manufacturing methods of both are totally different, one skilled in the art would not combine Matsumura and Ashcraft with Radovanovic.

Second, it is impossible to obtain the laminated film wherein an outer layer not having pores is laminated on an inner layer having pores by using the solvent extraction method (solution casting process). This is because the outer layer not having pores is not extracted by a solvent. Thus, the solvent does not arrive at the inner layer.

Third, when the outer layer not having pores is laminated on the inner layer having pores by combining Matsumura and Ashcraft with Radovanovic, the problem of Matsumura that permeability improves will be not solved. This is because when the outer layer not having pores is laminated on the inner layer having pores, permeability of the laminated film deteriorates. Therefore, one skilled in the art would not combine Matsumura and Ashcraft with Radovanovic.

The Applicants therefore respectfully submit that one skilled in the art would not make the hypothetical combination, but in any event, the combination would still result in completely different subject matter from that recited in Claim 1 and the claims depending therefrom. Withdrawal of the rejection is respectfully requested.

Claims 30-32 stand rejected under 35 USC §103 over the further hypothetical combination of Nakatani with Ashcraft and Matsumura. The Applicants respectfully submit that the rejection is now moot in view of the incorporation of the subject matter of Claims 5 and 7 into Claim 1 from which Claims 30-32 depend. Withdrawal of the rejection is respectfully requested.

In light of the foregoing, the Applicants respectfully submit that the entire application is now in condition for allowance, which is respectfully requested.

Respectfully submitted,



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